



RECENT FISHERY PUBLICATIONS

FISH AND WILDLIFE SERVICE PUBLICATIONS

THESE PROCESSED PUBLICATIONS ARE AVAILABLE FREE FROM THE DIVISION OF INFORMATION, U. S. FISH AND WILDLIFE SERVICE, WASHINGTON 25, D. C. TYPES OF PUBLICATIONS ARE DESIGNATED AS FOLLOWS:

- CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES AND ALASKA.
 FL - FISHERY LEAFLETS.
 SL - STATISTICAL SECTION LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 MDL - MARKET DEVELOPMENT LISTS.
 SEP. - SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

- | Number | Title |
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| CFS-1276 | - Frozen Fish Report, Annual 1955, 14 pp. |
| CFS-1283 | - Texas Landings, Jan. 1956, 3 pp. |
| CFS-1291 | - Frozen Fish Report, Feb. 1956, 8 pp. |
| CFS-1293 | - New York Landings, Jan. 1956, 4 pp. |
| CFS-1294 | - Florida Landings, Dec. 1955, 6 pp. |
| CFS-1301 | - Mississippi Landings, Jan. 1956, 2 pp. |
| CFS-1302 | - California Landings, Dec. 1955, 4 pp. |
| CFS-1303 | - New Jersey Landings, Feb. 1956, 3 pp. |
| CFS-1304 | - Texas Landings, Feb. 1956, 3 pp. |
| CFS-1306 | - Frozen Fish Report, Mar. 1956, 8 pp. |
| CFS-1307 | - Fish Stick Report, Jan. -Mar. 1956, 2 pp. |
| CFS-1308 | - North Carolina Landings, Feb. 1956, 2 pp. |
| CFS-1310 | - Mississippi Landings, Feb. 1956, 2 pp. |
| CFS-1315 | - Rhode Island Landings, Feb. 1956, 3 pp. |
| CFS-1319 | - Maine Landings, Feb. 1956, 3 pp. |
| CFS-1320 | - Alabama Landings, Feb. 1956, 2 pp. |
| CFS-1321 | - Chesapeake Fisheries, 1954 Annual Summary, 8 pp. |
| CFS-1322 | - Ohio Landings, Mar. 1956, 2 pp. |
| CFS-1332 | - Shrimp Landings, Mar. 1956, 4 pp. |
| CFS-1334 | - Maine Landings, Mar. 1956, 3 pp. |
- WHOLESALE DEALERS IN FISHERY PRODUCTS:**
 SL - 3 - Massachusetts, 1955 (revised), 9 pp.
 SL - 16 - Florida, 1955 (revised), 9 pp.
- FIRMS CANNING FISHERY PRODUCTS:**
 SL -102A - Pacific Sardines, 1955, 1 p.
 SL -102 - Maine Sardines, 1955 (including sea herring), 1 p.
 SL -103 - Tuna and Tunalike Fishes, 1955, 2 pp.
 SL -104 - Mackerel, 1955, 1 p.
 SL -105 - Alewives and Alewife Roe, 1955, 1 p.
 SL -108 - Salmon Eggs for Bait, 1955, 1 p.
 SL -112 - Shrimp, 1955, 2 pp.
 SL -117 - Pacific Sea Herring, 1955, 1 p.
 SL -119 - Squid, 1955, 1 p.
 SL -120 - Anchovies, 1955, 1 p.
- FL -336bb - Commercial Fisheries Outlook, Apr. -June 1956, 40 pp.
 FL -393 - Fisheries of the United States & Alaska, 1955 (revised), 3 pp.

MARKET DEVELOPMENT LISTS (REVISED):

- MDL-11 - New Hampshire Locker Plants, May 1956, 1 p.
 MDL-15 - Mississippi Locker Plants, Mar. 1956, 3 pp.
 MDL-32 - New Mexico Locker Plants, May 1956, 3 pp.
 MDL-47 - Wyoming Locker Plants, May 1956, 3 pp.
 MDL-53 - Nevada Locker Plants, May 1956, 1 p.
- Sep. No. 438 - Technological Studies on the Processing of Sea Lions.
 Sep. No. 439 - Iron Sulfide Discoloration of Tuna Cans, No. 3 - Effect of Variables Introduced by the Fish.
 Sep. No. 440 - Research in Service Laboratories (June 1956): Contains these short articles--"Fish Oils in Sprays for Citrus Trees," "Alaska Shrimp Waste has Possibilities as Hatchery Food," "Tech. Note. No. 33 - Reduction of Dehydration in Frozen Fish-Fillet Blocks," "Interim Federal Specifications for Canned Sardines."

THE FOLLOWING SERVICE PUBLICATIONS ARE AVAILABLE ONLY FROM THE SPECIFIC OFFICE MENTIONED.

- Gulf Monthly Landings, Production, and Shipments of Fishery Products, March 1956, 5 pp. (Market News Service, U. S. Fish and Wildlife Service, 609-611 Federal Bldg., New Orleans 12, La.) Gulf States shrimp, oyster, finfish, and blue crab landings; crab meat production; LCL express shipments from New Orleans; and wholesale prices of fish and shellfish on the New Orleans French Market; for the month indicated.
- Boston Fishery Products Monthly Summary, March 1956, 16 pp. Boston Fishery Products Monthly Summary, April 1956, 16 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Landings and ex-vessel prices for fares landed at the Boston Fish Pier and sold through the New England Fish Exchange; and Boston frozen fishery products prices to primary wholesalers; for the months indicated.
- (New York) Monthly Summary, February 1956, Receipts of Fishery Products at the New York City Wholesale Salt-Water Market, 4 pp. Monthly Summary-March 1956, Receipts of Fishery Products at the New York City Wholesale Salt-Water Market, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 155 John St., New York 38, N. Y.) Receipts in the salt-water section of the Fulton Fish Market by species and by states and provinces for the month indicated.
- California Fishery Products Monthly Summary, March 1956, 10 pp. Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif. California cannery receipts of raw tuna and tunalike fish, herring, and squid; pack of canned tuna, mackerel, herring, anchovies, and squid; market fish receipts at San Pedro,

Santa Monica, Eureka, and San Diego areas; United States imports of fishery products into California and Arizona; cold-storage freezings and holdings of fishery products; canned fish and frozen shrimp prices at the primary or wholesale level; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, April 1956, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 S. King St., Hampton, Va.) Fisheries production for the Virginia areas of Hampton Roads, Lower Northern Neck, and Eastern Shore; the Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data; for the month indicated.

(Chicago) March 1956 Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Prices, 10 pp., (Market News Service, U. S. Fish and Wildlife Service, 565 W. Washington St., Chicago 6, Ill.) Receipts at Chicago by species and by states and provinces; fresh-water fish, shrimp, and frozen fillet wholesale market prices; for the month indicated.

(Seattle) Monthly Summary of Fishery Products, April 1956, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 421 Bell St. Terminal, Seattle 1, Wash.) Includes landings and local receipts as reported by Seattle and Astoria (Oregon) wholesale dealers.

"Mortality of Olympia Oysters at Low Temperatures," by Harry C. Davis, 3 pp., printed. (Reprinted from Biological Bulletin, vol. 109, no. 3, December 1955, pp. 404-406.) (Available free from the Fishery Biological Laboratory, U. S. Fish and Wildlife Service, Milford, Conn.)

Open Letter to All Aku Fishermen, 6 pp., illus., processed. (Available free from Pacific Oceanic Fishery Investigations, P. O. Box 3830, Honolulu, Hawaii.)

MISCELLANEOUS PUBLICATIONS

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILDLIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE ORGANIZATION ISSUING THEM. CORRESPONDENCE REGARDING PUBLICATIONS THAT FOLLOW SHOULD BE ADDRESSED TO THE RESPECTIVE ORGANIZATION OR PUBLISHER MENTIONED. DATA ON PRICES, IF READILY AVAILABLE, ARE SHOWN.

"Age Composition of the Southern California Catch of Pacific Mackerel for the 1954/55 Season," by John E. Fitch, article, California Fish and Game, vol. 42, no. 2, April 1956, pp. 143-148, printed. California Department of Fish and Game, 926 J St., Sacramento 14, Calif.

Aktuelle Fryseritekniske Spørsmål (Topical Refrigeration Problems), articles, Fiskeridirektoratet Skrifter, 1954, Serie Teknologiske Undersøkelser, vol. 2, no. 15, 1954, 149 pp., illus., printed in Norwegian.

(Alabama) Department of Conservation, Report for Fiscal Year October 1, 1954, September 30, 1955,

232 pp., illus., printed. Department of Conservation, Montgomery 4, Ala., 1956. Presents the annual reports of the Alabama Department of Conservation for the fiscal year October 1, 1954, through September 30, 1955. Among these are reports from the Fish Management Section and Fisheries Research Section of the Department's Division of Game and Fish. The primary objective of the Fish Management Section is to apply fish management techniques in such a way as to obtain the highest possible production and harvest of fish from the inland fresh waters of the State. In the Fisheries Research Section, work was continued at Auburn upon fish parasites, the toxicity of various chemicals to fish and fish food organisms, pond weed control, the effect of herbicides upon fish production, and other phases of pond and lake management. The Division of Seafoods reports on the shrimp, clam, and oyster research programs, shrimp and oyster production, and other activities.

(Alaska) 1954 Annual Report, Report No. 6, 92 pp., illus., printed. Alaska Fisheries Board and Alaska Department of Fisheries, Juneau, Alaska, 1956. Summarizes the activities of the Alaska Fisheries Board and the Alaska Department of Fisheries for 1954. The work of the Biological Research Division was centered on the investigations of the troll salmon fishery of Southeastern Alaska, the salmon runs of the Taku River, the black cod fishery, the Kodiak king crab, and with continued construction and improvement of facilities at the Kitoy Bay Research Station. The king crab investigation has already paid dividends in pointing the way toward proper management of this new industry. Also describes the inspection, predator control, sport fish, and watershed management programs. The statistical part of the report contains data on the value of canned salmon by species (1945-54); number of canneries and the salmon pack (1945-54); salmon catch by gear, species, and districts, 1954; quantity and value of Alaska fisheries landings (1945-54); and quantity and value of Alaska fisheries products as prepared for market (1945-54). In addition to a financial statement, the report concludes with a discussion of the plans of the Department and its future outlook.

Annual Report of the Fisheries Research Board of Canada for the Year 1954, 187 pp., printed (Introduction is in English and French and balance of report in English). Fisheries Research Board of Canada, Ottawa, Canada, 1954. Full reports are presented of the work for 1954 of the biological and experimental stations of the Fisheries Research Board of Canada. The work of the Board is organized in three closely coordinated fields: Biological, technological, and oceanographic. During 1954 much effort was also expended in the field of industrial development. Stations for the study of the biology of fish are maintained at St. Andrews, N. B.; St. John's, Newfoundland; Winnipeg, Manitoba; and Nanaimo, B. C. Biological investigations in the Eastern Arctic are carried out from headquarters on the McGill University Campus, Montreal, P. Q. For greater convenience in covering the great distances involved these principal stations maintain field stations at appropriate places and port observers at the major fishing centers.

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The workers at these stations are concerned with the stocks of fish as they occur in the ocean or fresh water; finding out how many are caught, where and when they are caught, and how much effort was expended in catching them. Also studied are the rates of growth of populations of fish, their age at maturity, their fecundity, and their mortality, all with a view to determining the level of fishing effort which will exploit the fish populations most efficiently and profitably. Technological stations are situated at Halifax, N. S.; Grand River, P. Q.; and Vancouver, B. C. A technological unit comprised primarily of engineering services is stationed at St. John's, Newfoundland. Workers at these stations devote their attention to the fish from the time they are taken out of the water until they are purchased by the consumer. Experiments are carried out to improve methods in handling, preserving, processing and transporting fish, and in making useful products out of fish waste. Oceanographic work continues to be carried on from the coastal biological stations. A list of the publications and reports that were published in 1954 by the Board is included.

"The *Atlantis* Marine Geological Expedition to Peru and Chile," by Dr. Parker D. Trask, article, *Nature*, vol. 177, no. 4506, March 10, 1956, pp. 454-455, printed, single copy 2s. (28 U. S. cents). Macmillan & Co., Ltd., St. Martin's St., London, W. C. 2, England. Describes an expedition conducted under the auspices of Woods Hole Oceanographic Institution. The research vessel *Atlantis* was used to explore the deep trenches that lie off the coast of Peru and northern Chile during November and December 1955. The primary objective of the expedition was to study the sediments.

Bulletin of the Japanese Society of Scientific Fisheries, vol. 20, 1954, printed in Japanese with summaries in English. Japanese Society of Scientific Fisheries, Tokyo, Japan. Contains among others the following articles: "Experiment on the Antisepsis of Foods by Radioactive Rays. Preliminary Report--Preservation of Foods by Gamma-Radiation;" and Parts I and II--"Studies on the Concentration of Liver Oils. Application of Paper Chromatography for Selecting Solvent."

Bulletin of the Japanese Society of Scientific Fisheries, vol. 20, 1955, illus., printed in Japanese with summaries in English. Japanese Society of Scientific Fisheries, Tokyo, Japan. Contains among others the following articles: Parts II, III, IV, and V--"Experiment on the Antisepsis of Foods by Radioactive Rays. Preservation of Foods by Gamma-Radiation;" "On the Relation between Height of Drying Position of Fish and Number of Attached Flies;" and "Studies on the Economical Manufacture of Vitamin A Concentrate from Fish Liver Oil. VI. Esterification of Vitamin A Concentrate. Acetylation and Palmitylation with Acid Chloride."

Bulletin of the Japanese Society of Scientific Fisheries, vol. 21, 1955, printed in Japanese with summaries in English. Japanese Society of

Scientific Fisheries, Tokyo, Japan. Contains among others the following articles: Parts I and II--"Studies on Utilization of Fish-Wastes. On Preservation with Cereals, their Offals, and Sawdust."

Bulletin Officiel D'Information du Conseil Supérieur de la Pêche (Official Information Bulletin of the Supreme Fishery Council), Number 23, January-February-March 1956, 71 pp., illus., printed in French. Conseil Supérieur de la Pêche, 1 Avenue de Lowendal, Paris, France.

(Canada) Department of Fisheries Twenty-Fifth Annual Report, 1954-1955, 79 pp., printed. Department of Fisheries, Ottawa, Canada. This is the 88th Annual Fisheries Report of the Government of Canada. Discusses the conservation and development service; inspection and consumer service; markets and economics service; information and educational service; industrial development service; Fishermen's Indemnity Plan; Fisheries Prices Support Board; Fisheries Research Board; international commissions; and special committees. A section of the report is devoted to a review (with statistics) of Canada's fishing industry during 1954. An appendix presents the financial statements of the Department's various activities for 1954-55.

(Canada) Journal of the Fisheries Research Board of Canada, vol. 13, no. 2, March 1956, pp. 147-272, illus., printed. Fisheries Research Board of Canada, Ottawa, Canada. Contains, among others, the following articles: "Jellied Condition in the American Plaice, *Hippoglossoides platessoides* (Fabricius)," by Wilfred Templeman and Gertrude L. Andrews; "Spoilage of Fish in the Vessels at Sea: 3. The Value of Nitrite Ice and Nitrite Dips for the Preservation of Guttled Fish in the Hold of the Vessel," by C. H. Castell and G. K. Gunnarsson; "Atlantic Salmon Tagged in East Coast Newfoundland Waters at Bonavista," by A. A. Blair; and "Effects of Temperature, Salinity and Oxygen on the Survival of the American Lobster," by D. W. McLeese.

(Canada) Preliminary Annual Report of the Maritime Fisheries, 1955, 43 pp., processed, in French and English. Quebec Bureau of Statistics, Department of Trade and Commerce, Quebec, Canada. Statistics show quantity and value of fish caught in the Province of Quebec during 1955, 1954, and 1953, by species, counties, and landing points; and catch and disposition of the principal species of fish.

(Ceylon) Progress Reports, Biological and Technological, No. 1, 23 pp., illus., printed. Fisheries Research Station, Department of Fisheries, Colombo, Ceylon, July 1955. Includes the following articles: "An Investigation into the Keeping Qualities of Unguttled Fish from the Trawlers," by A. W. Lantz and L. D. Gunasekera; "Preservation of Fish," by A. W. Lantz and C. Gunasekera; "Fishery By-products--Liquid Fish Meal," by A. W. Lantz and C. Gunasekera; "Study of Wadge Bank Trawl Fishery," by S. Sivalingam and J. C. Medcof; "Ceylon Moss--A Marine Source," by M. Durairatnam

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and J. C. Medcof; and "Ceylon's Beach Seine Fishery," by P. Canagaratnam and J. C. Medcof.

Commercial Utilization of Dolphins (Porpoises) in Ceylon, by A. W. Lantz and C. Gunasekera, Bulletin No. 3, 14 pp., illus., printed. Department of Fisheries, Colombo, Ceylon.

(Delaware) Annual Report of the Delaware Commission of Shell Fisheries of the State of Delaware for the Fiscal Year July 1, 1954 to June 30, 1955, 7 pp., processed. The Delaware Commission of Shell Fisheries, Dover, Del., 1955. Short description of oyster industry.

Die DLG-Leistungsprüfung für Fischwaren, 1954 (The DLG Performance Test for Fishery Products, 1954), by W. Ludorff, article, Dtsch. Lebensmitt.-Rdsch., vol. 51, 1955, pp. 154-158, printed.

Directory of Public Refrigerated Warehouses, 1956, 148 pp., illus., printed. National Association of Refrigerated Warehouses, Tower Bldg., Washington 5, D. C. Contains complete up-to-date listings of the organization, services, and facilities of all NARW member companies (specializing in the safe storage of perishable commodities requiring freezer or cooler service) operating throughout the United States, its possessions, and various foreign countries.

East African Marine Fisheries Research Organization Annual Report, 1954-1955, 92 pp., illus., printed. Government Printer, Nairobi, Kenya, 1955. This report covers all of 1954 and from January 1-June 30, 1955. It describes the Organization's scientific investigations of the economically-valuable fishes of East African waters and fishing methods.

"Exploring Davy Jones's Locker with Calypso," by Capt. Jacques-Yves Cousteau, article, The National Geographic Magazine, vol. CIX, no. 2, February 1956, pp. 149-161, illus., printed, single copy 75 cents. National Geographic Society, Washington 6, D. C. Describes an expedition of the ocean research vessel, Calypso, in which tests were made with a new camera designed by Dr. Harold E. Edgerton to take the world's first photographs under the Indian Ocean and Red Sea.

"Fisheries and Naval Architecture," by Jan-Olof Traung, article, FAO Fisheries Bulletin, vol. VIII, no. 4, October-December 1955, pp. 167-197, illus., printed. Food and Agriculture Organization of the United Nations, Rome, Italy. A discussion of fisheries and naval architecture with chapters on (1) models; (2) the fisheries naval architect; (3) naval architects need to go fishing; (4) approach to the work; (5) boats will always be improved; (6) the dilemma of speed; (7) hull shape; (8) importance of sharp entrance; (9) block co-efficient; (10) prismatic co-efficient; (11) shape of the aft body; (12) importance of sharp propeller posts; (13) scope for improvement; (14) sea-kindliness; (15) propellers; (16) selection of engines; (17) hull construction; (18) work to be done; and (19) increased recognition of naval architecture in fisheries.

Fishes of Japan, by Yaichiro Okada, 462 pp., illus., printed, \$10. Maruzen Co., Ltd., Tokyo, Japan, 1955. Describes and illustrates 391 species of fish which inhabit the waters in and around Japan. Gives information on the distribution, ecology, life history, method of capture, and utilization of the various species. Also includes a list of the scientific, Japanese, and English names of the fish.

"Fish Meals as Amino Acid Sources in Chick Rations," by C. R. Grau and M. A. Williams, article, Poultry Science, vol. 34, 1955, pp. 810-817, printed. Poultry Science, Kansas State College, Manhattan, Kansas.

"Fishing Vessels and the Principle of Innocent Passage," by Charles B. Selak, Jr., article American Journal of International Law, vol. 48, no. 4, October 1954, pp. 627-635, printed, single copy \$2. The American Journal of International Law, 1826 Jefferson Pl. NW., Washington 6, D. C.

Fourteenth Annual Report of the Atlantic States Marine Fisheries Commission (to the Congress of the United States and to the Governors and Legislators of the Fifteen Compacting States), 62 pp., printed. Atlantic States Marine Fisheries Commission, 22 West First St., Mount Vernon, N. Y., April 1956. In this annual report the Commission reports progress on fishery research projects initiated and carried on by the Commission and on its behalf by the U. S. Fish and Wildlife Service. Under the North Atlantic Section of the report are included discussions of projects dealing with lobsters, hard-dock, clams, freezing fish in the round at sea, rebuilding the Service's Woods Hole Laboratory, ocean perch, cooperative striped bass program, shad, yellowtail flounder, exploratory fishing, catch statistics, fishery college in Massachusetts, Atlantic salmon, sea scallops, dams in the Connecticut River, dragging operations, industrial fishing (formerly called "trash" fishing), whiting, Maine herring, fluke, technological program under Saltonstall-Kennedy Act, and the need for improving technological facilities. Under the Middle Atlantic Section there is a discussion of projects dealing with shad, Delaware River anadromous fisheries management program, gray sea trout (weakfish), cooperative striped bass program, catch statistics, fluke, offshore ocean fisheries and waste disposal problems, sea scallops, dragging operations, sportfish surveys, yellowtail flounder, hard clams, menhaden studies, and Saltonstall-Kennedy funds for state research. The Chesapeake Bay Section includes discussions of projects concerned with croaker, blue crab, Chesapeake Bay Institute, shad, cooperative striped bass program, oysters, joint legislative committee on migratory finfish, menhaden, clams, deposits of mine waters in Chesapeake Bay, catch statistics, and finfish research. Under the South Atlantic Section a discussion of the following programs is included: cooperative offshore research program, shrimp, shad, license fees and severance taxes, catch statistics, cooperative striped bass program, bluefin tuna, gear development, out-of-state boats in inland waters, sale of fish by anglers, pollution, blue crabs, marketing survey of Florida fisheries, southern oyster technological

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research, and recommendations of the International Law Commission. Another section of the report deals with the following general subjects: catch statistics; Northwest Atlantic fisheries; Amendments No. 1 and No. 2 to the Atlantic States Marine Fisheries Compact--Common Fisheries and Inland Fisheries; fisheries research; legislation needed; activity of the fishing industry; the growing giant--sportfishing; vessel insurance survey; cooperative striped bass program; Federal water pollution control legislation; fisheries education; Northern Regional Committee on Marine Science; and report of International Law Commission re territorial waters and offshore fisheries.

(Gold Coast) Report of the Fisheries Department for the Year 1954-55, by F. R. Johnson, 10 pp., illus., printed, 2s. (28 U. S. cents). Government Printing Department, Accra, Gold Coast, 1956. This report, which covers the period from April 1954 through March 1955, describes the activities of the Fisheries Department as follows: (1) continued experiments in the use of motor surfboats as fishing vessels and the training of crews; (2) trawl catch; (3) construction of a fishing harbor at the port of Tema; (4) canoe fisheries; (5) building of motor fishing vessels in the Department's yard at Sekondi; and (6) development of the river fisheries.

Growth Studies in the Quahog, VENUS MERCENARIA, by Alton H. Gustafson, 11 pp., illus., processed. (Reprinted from Proceedings of the National Shellfish Association, vol. 45, pp. 140-150, 1954.) Department of Sea and Shore Fisheries, Vickery-Hill Bldg., Augusta, Maine. A preliminary and progress report of the growth studies of the quahog, *Venus mercenaria*. It deals chiefly with a comparison of growth of populations of several sizes planted under differing conditions in several localities, an analysis of the annual increment, and some comparisons with conditions reported in other geographic areas.

The Herring Gull-Cormorant Control Program, State of Maine, 1953, by Robert L. Dow, General Bulletin No. 1, 26 pp., printed. Department of Sea and Shore Fisheries, Augusta, Maine, revised Aug. 1953.

"The Historical Origins of the Three-Mile Limit," by H. S. K. Kent, article, American Journal of International Law, vol. 48, no. 4, October 1954, pp. 537-553, printed, single copy \$2. The American Journal of International Law, 1826 Jefferson Pl. NW., Washington 6, D. C.

(International Commission for the Northwest Atlantic Fisheries) Statistical Bulletin for the Year 1954, vol. 4, 59 pp., illus., printed. International Commission for the Northwest Atlantic Fisheries, Halifax, N. S., Canada, 1956. This bulletin is divided into two parts as follows: Part I summarizes the 1954 statistics, and Part 2 gives tables of statistics dealing with the fisheries in the Convention Area in 1954. The material is the outcome of the combined work of the fisheries departments of the eleven countries fishing in the Northwest Atlantic, and

comprises a wealth of detailed information on fishing efforts and landings. In previous years the statistics recorded in the Bulletin referred only to groundfish. However, at the Fifth Annual Meeting the Commission decided that statistics should be collected on all species landed in order to get as complete a picture as possible of the total utilization of the marine resources. Accordingly, the present Bulletin includes summary statistics on all marine species landed from the Convention Area. They are listed with their scientific names and the common names used in the member countries.

Investigations of Indiana Lakes and Streams, vol. IV, October 1955, 228 pp., illus., printed. Department of Zoology, Indiana University, Bloomington, Ind. Includes the following reports: "A Study of the Factors Affecting Stream Productivity by the Comparative Method," by Keith Vollmer Slack; "Key to the Fishes of Indiana," by Shelby D. Gerking; "Reproduction of the White Bass, *Morone chrysops*," by Carl D. Riggs; "The Injection of Latex Solution as a Fish Marking Technique," by Claude S. Davis; "Fish and Fishing in Spear Lake, Indiana," by W. E. Rickner; "Oxygen Depletion in Salt Creek, Indiana," by Myrtle V. Schneller; and "Distributional Ecology of the Cisco (*Coregonus artedii*) in Indiana," by David G. Frey.

(Italy) Statistica della Pesca e della Caccia, 1955 (Fishing and Hunting Statistics, 1955), 90 pp., illus., printed in Italian. Istituto Centrale di Statistica, Rome, Italy, 1955.

Laxfisket och Laxbeståndet i Östersjoområdet Under Senare År (The Salmon Catch and the Salmon Stock in the Baltic during Recent Years), by F. Byrachefen and Dr. Gunnar Alm, 63 pp., illus., printed in Swedish with summary in English. (Reprinted from Svenska Vattenkraftforeningens Publikationer 441 (1954:5) pp. 43-100) Svenska Vattenkraftforeningens Publikationer Erhallas Genom Foreningens Expedition, Norrlandsgatan 16, Stockholm, Sweden.

The Marine and Fresh-Water Plankton, by Charles C. Davis, 562 pp., illus., printed, \$10. Michigan State University Press, East Lansing, Mich.

(New Zealand) The Fisheries (General) Regulations 1950 (Reprint), 1956/16, 33 pp., printed, 1s. 6d. (20 U. S. cents). Marine Department, Wellington, New Zealand, 1956. These regulations are divided into parts, as follows: Part I--Preliminary; Part II--Nets and Net Fishing; Part III--Danish Seining and Similar Methods; Part IV--Trawling; Part V--Line Fishing; Part VI--Blue Cod; Part VII--Swordfishing; Part VIII--Crayfish; Part IX--Shellfish; Part IXa--Flatfish; Part X--Miscellaneous and General.

(North Dakota) Fishing Regulations Governing the Taking of Fish in North Dakota during the Calendar Year 1956, 2 pp., printed. North Dakota Game & Fish Dept., Bismarck, N. Dak. Commercial fishing regulations are included as well as sport fishing regulations.

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Organization for Trade Cooperation, Department of State Publication 6268, Commercial Policy Series 155, 25 pp., illus., printed, 15¢. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Department of State, Washington, D. C., 1956. This pamphlet is designed to give a simple explanation of the OTC--its aims, structure, and responsibilities.

(Pacific Marine Fisheries Commission) Eighth Annual Report of the Pacific Marine Fisheries Commission for the Year 1955 (To the Congress of the United States and to the Governors and Legislatures of Washington, Oregon and California), 16 pp., printed. Pacific Marine Fisheries Commission, Portland, Ore. Describes briefly the activities of the Commission and contains a short resume of the one meeting of the Commission during 1955. Also included are summaries of reports submitted by the participating agencies on the research conducted in 1955 on the following marine species and fisheries: petrale sole fishery, troll chinook salmon fishery, sablefish (black cod) fishery, ocean salmon, albacore tuna, and otter trawl fishery. In addition, contains a financial report of the Commission.

Papers Presented at the International Technical Conference on the Conservation of the Living Resources of the Sea, Rome, 18 April to 10 May 1955, A/CONF. 10/7, United Nations Publication Sales No.: 1956.II.B.1, 383 pp., illus., processed, \$3. International Documents Service, Columbia University Press, 2960 Broadway, New York 27, N. Y., 1956. The International Technical Conference on the Conservation of the Living Resources of the Sea which was held in 1955 marked the second occasion on which a United Nations conference discussed the conservation of fish and other marine resources. Following an introductory paper on the historical development of concepts of conservation, the papers in this volume, which were presented at the Conference, are grouped into the following general categories: broad scientific and theoretical aspects of conservation; operations under existing international conventions; and specific regional resources or problems. Finally, there are two papers dealing in more general terms with the identification of conservation problems and suggestions for their solution. The papers are listed as follows: "Concepts of Conservation," by Michael Graham; "The Scientific Basis for a Conservation Programme," by Milner B. Schaefer; "A First Approximation to a Modern Theory of Fishing," by Michael Graham; "Aspects of the Life History of Certain Resources of the Sea in Relation to the Physical Environment," by United Nations Educational, Scientific and Cultural Organization; "The Conservation of Biological Resources in Coastal Waters," by Gerard Belloc; "Biological Appraisal of the Ocean, and the Problem of Transoceanic Acclimatization," by Lev Zenkevich; "International Conservation Problems, and Solutions in Existing Conventions," by William C. Herrington and John L. Kask; "Regulation of North sea Fisheries under the Convention of

1946," by Cyril E. Lucas; "Conservation Problems in the North-Western Atlantic," by Erik M. Poulsen; "Scientific Investigation of the Tropical Tuna Resources of the Eastern Pacific," by Milner B. Schaefer; "Management of the Halibut Fishery of the North-Eastern Pacific Ocean and Bering Sea," by Henry A. Dunlop; "The International Fraser River Sockeye Salmon Fishery," by Loyd A. Royal; "The International Whaling Commission," by Remington Kellogg; "Note on the General Fisheries Council for the Mediterranean," by M. J. Girard; "Fluctuations in the Commercial Fish Populations of the North-Western Pacific in Relation to Environmental and Other Factors," by Petr Moiseev; "Fishery Problems and Fishery Conservation in Italy," presented by the Italian delegation; "Life History, Ecology and Behaviour of Important Species Constituting the Fishery Resources of the Seas Around Japan," presented by the Japanese Delegation, with comments by the Korean and Japanese delegations; "The Importance of Conservation of Stocks of Fish and Sea Mammals in Arctic Waters," by Paul Hansen; "Productivity and Intensity of Exploitation of the Adriatic," by Sime Zupanovic; "Migrations of the Adriatic Sardine in Relation to Zooplankton," by Tomo Gamulin; "Some Observations on the Marine Fisheries of Egypt," by Mohamed Zuhi; "Comments on the Principle of Abstention," by William C. Herrington; and "Classification of International Conservation Problems," by Geoffrey L. Kesteven and Sidney J. Holt.

Participation of the United States Government in International Conferences, July 1, 1953-June 30, 1954, Department of State Publication 5776, International Organization and Conference Series I, 28, 245 pp., printed, 70¢. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Office of International Conferences, Department of State, Washington, D. C., 1955. This volume is designed to serve as a record of the official participation of the United States Government in multilateral international conferences and meetings of international organizations during the period July 1, 1953-June 30, 1954. The meetings on fisheries are listed as follows: (1) First Meeting of the International North Pacific Fisheries Commission, Washington, D. C., February 1-12, 1954; and (2) Fourth Meeting of the International Commission for the Northwest Atlantic Fisheries, Halifax, June 14-19, 1954.

(Portugal) Estatistica das Pescas Maritimas no Continente e Ilhas Adjacentes no Ano de 1950 (Marine Fisheries Statistics for the Continent and the Adjacent Islands in 1950), 127 pp., printed. Ministerio da Marinha, Comissao Central de Pescarias, Lisbon, Portugal, 1955.

Principles of Plant Layout for Small Plants, by Raymond C. Newton, Technical Aids for Small Manufacturers No. 42, 4 pp., processed. Small Business Administration, Washington 25, D. C., April 1956.

Progress Reports of the Pacific Coast Stations, No. 105, 30 pp., illus., printed. Fisheries Research Board of Canada, Ottawa Canada,

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILDLIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE ORGANIZATIONS ISSUING THEM.

February 1956. Among the articles included are: "Growth of the British Columbia Shipworm," by D. B. Quayle; "Control of Post-Mortem Bacterial Spoilage of Whales with Chlorotetracycline," by P. B. Crean, H. L. A. Tarr and R. B. Barker; "The Relation of Stock Density to 'Milkiness' of Lemon Sole in Union Bay, B. C.," by C. R. Forrester; "Effect of Chlorotetracycline and Storage Temperatures on the Quality of Shucked Oysters," by J. W. Boyd and H. L. A. Tarr; "Seasonal Temperature and Salinity Variations in Queen Charlotte Strait, B. C.," by F. G. Barber; "Project NorPac," by A. J. Dodimead; "The Sodium and Potassium Content of British Columbia Sea Foods. II. Some Commercially Important Fresh Fish," by J. McBride and R. A. MacLeod; "Age and Growth of Lingcod (*Ophiodon elongatus*)," by B. M. Chatwin; "The Conversion of Herring Stickwater to Solubles. III. Preservative Action of Penicillin G on Salmon Offal Stickwater Under Plant Conditions," by W. A. B. Thomson, R. E. E. Jonas, R. A. MacLeod and D. R. Idler.

Protokolle zur Fischereitechnik (Journal of Fishery Technology), Heft 15, Bd. III (vol. 3, no. 15), 66 pp., illus., processed, in German. Institut für Netz- und Materialforschung, Hamburg 36, Neuer Wall 72, Germany, October 1955. Contains two articles: one on experiments with new gear in the river fishery of the Lower Weser, and another on new fibres for use by the fishing industry.

Report to Congress on the Mutual Security Program (For the Six Months Ended December 31, 1955), 37 pp., illus., printed, 35 cents. Mutual Security Agency, Washington, D. C., December 31, 1955. (For sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

Research Briefs, vol. 6, no. 1, November 1955, 38 pp., illus., printed. Fish Commission of Oregon, 307 State Office Bldg., Portland 1, Oregon. Includes the following articles: (1) "The Intertidal Mussel, Piddock, and Abalone Resources of Oregon's Outer Coast," by James E. McCauley and Lowell D. Marriage; (2) "The Transfer of Hatchery Fish to Estuarine Waters," by John T. Gharrett; (3) "Escapement of Spring Chinook Salmon and Steelhead Over Willamette Falls in 1953," by Earl F. Pulford; (4) "Fourth Progress Report on Salmon Diet Experiments," by James W. Wood, Wallace F. Hublou, Thomas B. McKee, Russell O. Sinnhuber, and Duncan K. Law; and (5) "Migrations of Starry Flounder (*Platichthys stellatus*) Tagged in the Columbia River," by Sigurd J. Westheim.

"Role of Science in Marine Fisheries: Limitations and Potentialities," by R. E. Coker, article, The Scientific Monthly, vol. 82, no. 4, April 1956, pp. 176-193, illus., printed, single copy 75¢. The Scientific Monthly, 1515 Massachusetts Ave. NW., Washington 5, D. C. An excellent discussion of the role of science in marine fisheries. The author discusses briefly some prominent contrasts between the conditions that face

agricultural and fishery scientists. To marine biologists, some of the conditions may well seem too obvious to require discussion. Nevertheless, the conditions are not always fully grasped by those who would support scientific research in aid of fisheries, and their statement in brief is requisite background for consideration of potentialities and limitations. The author discusses in greater detail scientific research and problems in the individual estuarine fisheries and the sea fisheries. In conclusion he states that "it may not be quick and spectacular increases in fishery yield that can be expected but rather gradual and substantial improvement, based on scientific and economic studies to support and supplement individual initiative and enterprise, which must always be a chief reliance. Increasing profit to fishermen and to states and wiser regulation of fishery practices with fewer useless and costly restrictions are to be striven for. It is a virtual certainty that gratifying results will follow from continued and energetic cooperation between administrators, scientists, statisticians, economists, and, most important, fishery operators and fishermen."

"Some Thermodynamic Properties of Fish and their Effect on the Rate of Freezing," by R. A. K. Long, article, J. Sci. Food Agric., vol. 6, 1955, pp. 621-633, printed.

The Sea and Its Rivers, by Alida Malkus, 221 pp., illus., printed, \$2.75. Doubleday & Co., 575 Madison Ave., New York 22, N. Y. Stories about the Gulf Stream and other currents, the ocean's waves and tides, the varied life, and the mineral wealth in the sea.

"Studies on the Conversion of Fish Stickwater to Solubles. I. The Bacterial Decomposition of Stickwater at High Temperatures," by R. A. MacLeod, D. R. Idler, and W. A. B. Thomson, article, Applied Microbiology, vol. 3, 1955, pp. 202-204, printed. Williams and Wilkins Co., Mt. Royal and Guilford Avenues, Baltimore 2, Md.

"Studies on the Conversion of Fish Stickwater to Solubles. II. Prevention of Bacterial Decomposition of Stickwater at High Temperatures," by D. R. Idler, R. A. MacLeod, W. A. B. Thomson, article, Applied Microbiology, vol. 3, 1955, pp. 205-208, printed. Williams and Wilkins Co., Mt. Royal and Guilford Avenues, Baltimore 2, Md.

(Sweden) Fiske, 1954 (Fisheries, 1954), 78 pp., illus., printed in Swedish with summary in English. Central Bureau of Statistics, Stockholm, Sweden, 1956. An account of the fisheries of Sweden during 1954, with special reference to the salt-water fisheries. Statistics are given for the number of fishermen, fishing gear, and fishing craft in the salt-water fishery, by counties; quantity and value of the salt-water fishery in different fishing areas and by counties; herring fishery (including Baltic herring) by certain counties; and other statistical data. Also includes a list of the different kinds of fish and shellfish in Swedish, Latin, and English.

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILDLIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE ORGANIZATIONS ISSUING THEM.

39 Fathoms Southeast, North Edisto Sea-Buoy off South Carolina, by Francis B. Taylor, Contributions from Bears Bluff Laboratories No. 20, 15 pp., illus., printed. Bears Bluff Laboratories, Wadmalaw Islands, S. C., April 1956. A report covering the activities of the Laboratories' offshore research vessel, T-19, from April 1955 through February 1956. The program includes a study of (1) the ocean habitat of the brown shrimp, *Peneaus aztecus*, the brown-spotted shrimp, *Peneaus duorarum*, and the white shrimp, *Peneaus setiferus*; (2) evidences of their migratory movements, spawning habits, and catchability at sea; (3) pelagic movements of the crab family, especially the blue crab, *Callinectes sapidus*, the only species in South Carolina of any commercial use; (4) bottom characteristics and water temperatures at various depths; and (5) the composition of the aquatic population. While the accent is on the practical aspects of deep-sea fishing, due attention is given to the ecological and taxonomic requirements of the program.

Tunas of the Genus THUNNUS of the Northern Caribbean, by Harvey R. Bullis, Jr., and F. J. Mather, III, American Museum Novitates Number 1765, 12 pp., illus., printed. The American Museum of Natural History, Central Park West at 79th St., New York 24, N. Y., April 6, 1956. A report of the Service's exploratory fishing expedition in the northern Caribbean. Observations show that all five species of the genus *Thunnus* (bluefin tuna, *T. Thynnus*; albacore, *T. alalunga*; blackfin tuna, *T. atlanticus*; Atlantic big-eyed tuna, *T. obesus*; and yellowfin tuna, *T. albacares*) known to occur in the Atlantic may be found in the Caribbean. The authors state that "Three of these, the yellowfin, the albacore, and the Atlantic big-eyed, were encountered in sizes which may be fished efficiently by the long-line method and utilized in canneries. This may be a factor of some importance to the new tuna industry that is being started in Puerto Rico, as dependence on a single species might result in serious fluctuations in supply. A further implication that may be drawn from these observations is that the yellowfin tuna, the albacore, and the Atlantic big-eyed, which are known to be abundant in the eastern Atlantic as far west as the Azores, may be distributed all the way across the tropical and subtropical parts of that ocean. This suggests the possibility of an extensive tuna resource in the tropical Atlantic."

United States Exports of Domestic and Foreign Merchandise (Commodity by Country of Destina-

tion), Calendar Year 1955, Report No. Ft 410, Part II, 403 pp., processed, \$1.75. Bureau of the Census, U. S. Department of Commerce, Washington, D. C., April 1956. (For sale by the Superintendent of Documents, Washington 25, D. C.)

The Use of Equipment and Techniques in Applied Shellfish Management, by Dana E. Wallace, 3 pp., processed. (Reprinted from Proceedings of the National Shellfish Association, vol. 45, pp. 209-211, 1954) Department of Sea and Shore Fisheries, Vickery-Hill Bldg., Augusta, Maine. Maine's hard and soft-shell clam fishery is dependent upon natural sets, their survival and growth to commercial size, and, in the soft-shell industry, the efficiency with which the clams are harvested. This article summarizes the projects of the Department of Sea and Shore Fisheries as well as cooperative work with the Fish and Wildlife Service Clam Investigations, and the application of results as carried on with shellfish producing communities.

The Whiting (GADUS MERLANGUS L.) in the North Sea, by R. W. Ellis and R. Jones, Scottish Home Department Marine Research No. 2, 28 pp., illus., printed, 5s. (70 U. S. cents). Her Majesty's Stationery Office, Edinburgh, Scotland, 1956. The whiting is distributed over most of the fishing grounds of the North Eastern Atlantic but of these the North Sea is much the most important in contributing more than 50 percent of the European landings. This report discusses the distribution of O and I group whiting, adult distribution, brood fluctuations, growth, and the relationship between yield and mortality rate. Adult whiting are found all over the North Sea although their center of density is no longer in the central regions but tends to be farther to the north. Whether this can be regarded as evidence of a northerly migration with age, or simply as the consequence of the much higher rate of fishing that takes place in the central area, it is not possible to say. A study of the commercial whiting statistics revealed that there had been an increase in post-war landings associated with a decrease in the total fishing effort. A theoretical relationship between fishing mortality rate and yield was derived for the whiting and it was concluded that the post-war increase in landings was such that it could reasonably have been due to the decrease in fishing effort that actually took place.

The Wonderful World of the Seashore, by Albro Gaul, 247 pp., illus., printed, \$5. Appleton-Century-Crofts, Inc., 35 W. 32nd St., New York 1, N. Y.

